Cisco® IOS XR Broadband Network Gateway Implementation and Verification v1.0 (IOSXR304)

Register Online

Schedule

Class Length: 5 Days

G2R = “Guaranteed to Run” | OLL = “Online LIVE”
ILT = “Instructor-Led-Training”

This course is not currently available on the public schedule. Please contact us using the information in the footer below to inquire about future dates or to schedule a private class.

Overview

The Cisco IOS XR Broadband Network Gateway Implementation and Verification (IOSXR304) v1.0 course teaches you how to successfully deploy, configure, operate, maintain, and support a Cisco IOS® XR Broadband Network Gateway (BNG) solution. This course will show you how to implement and verify BNG on a Cisco IOS XR device to manage subscriber access. You will also learn how to implement and verify subscriber management functions, including authentication, authorization, and accounting of subscriber sessions, address assignment, security, policy management, and Quality of Service (QoS).

Prerequisite Comments

Before taking this course, you should have the following knowledge and skills:
Experience working with Cisco IOS XR Software-based platforms
Basic understanding of routing protocols and Multiprotocol Label Switching (MPLS)
Basic understanding of AAA functions

Target Audience

System installers
System integrators
System administrators
Network administrators
Solution designers

Course Objectives

After taking this course, you should be able to:
Describe the architecture and function of the Cisco IOS XR Broadband Network Gateway
Configure and verify Authentication, Authorization, and Accounting (AAA) in a Broadband Network Gateway deployment
Define policies to control subscriber traffic
Establish and verify subscriber sessions
Prioritize subscriber traffic using QoS
Implement subscriber features
Deploy redundancy for subscriber sessions

Course Outline

1 - Broadband Network Gateway Overview

BNG Architecture
BNG Software and Hardware Requirements

2 - Configuring and Verifying Authentication, Authorization, and Accounting

AAA Overview and Operation
RADIUS Operation and Configuration
DIAMETER Operation and Configuration

3 - Activating Control Policy

Control Policy Overview
Creating and Activating Class Maps and Policy Maps
Defining Dynamic Templates

4 - Establishing Subscriber Sessions

Subscriber Session Overview
Establishing IPoE and PPPoE Sessions
DHCP Operation
Subscriber Interface Neighbor Discovery
Static Session and Session Limits
BGP Subscriber Support

5 - Deploying Quality of Service

Quality of Service Overview and QoS Feature Support
RADIUS Based Policing
Share Policy Instances and Merged Policy-Maps

6 - Configuring Subscriber Features

Managing Control Plane Traffic
Controlling Packet Forwarding
Providing Multicast Services
Routing and Traffic Mirroring on Subscriber Sessions

7 - BNG Geo Redundancy and XML Support

Geo Redundancy Overview and Deployment Models
Configuring and Verifying Geo Redundancy
XML Support